

REMARKS

Reconsideration and allowance are respectfully requested.

Claims 1-7, 9 and 14-16 are pending. The amendments are fully supported by the original disclosure and, thus, no new matter is added by their entry. For example, typographical errors and other informalities are corrected. The Examiner's suggestion to replace "metabolic product" with --biomass-- is adopted (n.b. the biomass comprises a viscous material). The claim limitation of dependent claim 8 is incorporated into claim 1.

The "Office Action Summary" acknowledged the claim for foreign priority, but alleged that none of the certified copies of the priority documents have been received. This is incorrect as shown by the attached. In the parent Application No. 09/958,928, the copies of the Office Action Summary mailed October 3, 2003 and the Notice of Allowability mailed March 25, 2004 both confirm that all certified copies of the priority documents have been received in the U.S. national-stage application from the International Bureau. Therefore, Applicants request that acknowledgement of the receipt of the certified copy of priority document JP 2000-40218 be made in the next Official communication. This request was previously made in the Amendment filed December 5, 2006 but no reply was received in the last Action.

Claims 10-13 were objected to under 37 CFR § 1.75 as allegedly "being a substantial duplicate" of claims 6-9. Applicants traverse because there is no duplication in the pending claims. Withdrawal of the objection is requested.

35 U.S.C. 112 – Definiteness

Claims 1-16 were rejected under Section 112, second paragraph, as being allegedly "indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention." Applicants traverse.

In accordance with the Examiner's proposal, the claims are amended as she had suggested to replace "metabolic product" with --biomass-- and to clarify that the incubation is carried out in a liquid medium.

Applicants request withdrawal of the Section 112, second paragraph, rejection because the pending claims are clear and definite.

35 U.S.C. 102 – Novelty

A claim is anticipated only if each and every limitation as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of Calif.*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is claimed. See *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Claim 1 was rejected under Section 102(e) as allegedly anticipated by Bijn (US 5955321). Applicants traverse because the viscous material contained in the metabolic product (i.e., biomass) produced by incubating the photosynthetic bacterium with the lactic acid bacterium as required by claim 1 is neither taught nor suggested in Bijn. Since claim 16 is not rejected in the Action, the Examiner appears to acknowledge its patentability over the prior art. These differences also make claim 1 novel and nonobvious.

Bijn mentions *Rhodopseudomonas* merely as examples of vitamin B12 producing bacteria, but does not demonstrate the use of *Rhodopseudomonas* to make Applicants' claimed composition. Moreover, in culturing bacteria to produce a water-soluble target material such as vitamin B12, the artisan would consider inhibition of the production of the viscous material (especially the production of polysaccharides) in culture medium in order to easily separate and extract the water-soluble target material from the culture medium. In the case where the viscous material is an oil, the oil can be easily removed e.g., by hexane extraction. Thus, the presence of oil will not be a significant hindrance to separation and extraction of a water-soluble target material from the culture medium. By contrast, in the case where the viscous material is a polysaccharide, the presence of the polysaccharide will hinder stirring and transferring of the culture medium. Further, in this case, the water-soluble target material will be present in the macromolecules of the polysaccharide, thereby hindering separation and extraction of the water-soluble target material from the culture medium containing a large quantity of the viscous material.

Therefore, Bijn does not teach or suggest a drug comprising a biomass containing a viscous material having the saccharide composition required by Applicants' claim 1. Claim 1 of the present application is thus novel over Bijn.

Himmelblau (US 5115084) describes a water-insoluble, viscous, biomass oil that is not encompassed by Applicants' claimed invention, which is characterized as a biomass that is not comprised of an oil but of polysaccharide(s). Claim 1 defines the mono-saccharide contents of a product after water-washing and subsequent acid hydrolysis. This indirectly defines the water-insoluble, polysaccharide composition comprising the biomass prior to water-washing and subsequent acid hydrolysis. Neither Himmelblau nor the other cited references teach or suggest such polysaccharide(s).

Similarly, the cited references do not teach or suggest the medical benefits that are disclosed by Applicants in their specification. Accordingly, their pending claims are neither anticipated by nor obvious over the cited references.

Withdrawal of the Section 102 rejection is requested because the cited document fails to disclose all limitations of the claimed invention.

Conclusion

Having fully responded to all of the pending objections and rejections contained in this Office Action, Applicants submit that the claims are in condition for allowance and earnestly solicit an early Notice to that effect. The Examiner is invited to contact the undersigned if any further information is required.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By:


Gary R. Tanigawa
Reg. No. 43,180

901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100